

34. FIRST REPORT OF AN ARACHNID ORDER CYPHOPHTHALMI (DA)  
FROM INDIA IN ARUNACHAL PRADESH  
(With five text-figures)

Cyphophthalmi (da) was erected by Simon in 1879 as a sub-order under the order Opiliones (= Phalangida) of the class Arachnida. Savory (1935, 1964, 1977) was the first arachnologist to separate this sub-order and raise it to the level of an order.

Most of the work on these animals is by Jubertie (1961, 1963, 1967, 1968). This interesting group was separated from other opiliones on the basis of : sculpturing of the exoskeleton; nature of body segments; position of eyes (when present); absence of genital operculum; use of spermatophore, tubercles for odoriferous glands, tarsal glands of the males; and anal glands of the males (Savory 1977). Some of the above characters have been illustrated in Figs. 1 and 2.

The Cyphophthalmids are small mite-like (= Notostigmata) arachnids, generally found in caves, under old logs, and in forest litter. Due to their secretive habits and small body size they remain unnoticed and undiscovered from major parts of the world. This order as known has only two families, namely Stylocellidae and Sironidae (Davies 1977). The main character distinguishing these two families is the presence of eyes in Stylocellidae and absence of eyes in Sironidae. The former has 15 genera and the latter 10. The most common genus *Rakia* Hirst (1915-20) has 20 species, mostly from New Zealand, under the family Sironidae (Davies 1977).

There are only two species known from the oriental region. They are reported from Indonesia, viz. 1. *Stylocellus beccarii* (Thorell 1882) (locality: Sereinu, Mentawi Isl.) and 2. *S. weberii* Hans and Soer 1904 (locality : Pangharang, Sumatra) (Roewer 1935). These are the only known localities near the Indian subcontinent. The order was unknown from India until the present collection from Miao (600 m above msl, dist. Tirap, Arunachal Pradesh, north-east India, Coll. Dr. D.B. Bastawade, 6 March 1990).

One mature female of an unknown species

was collected 5-6 km north-west of Miao, from under a heavy, decaying log. The specimen was collected along with two Scorpiopsinid (Vaejovidae) scorpions and six Phalangids. This Cyphophthalmid specimen was seen to be distinctly different from those of Phalangids and was slow moving and less sensitive to disturbance at the time of collection.

The female measured 3 mm in total body length, with prosoma (carapace) 1 mm and opisthosoma (abdomen) 2 mm. The integumentary sculpturing was granular but not coarse. Prosoma prominent with a pair of lateral tuberculoid odoriferous gland openings (Fig. 1). The specimen, being totally blind, belongs to the family Sironidae.

The chelicerae are primitive, three-segmented, basal segment narrow, rugose, chela dentate in regular fashion as in Figs. 3, 4. Pedipalps short and slender, apexed with single, minute spine as in Fig. 1. Legs I-IV are seven-segmented, leg formula 4-1-3-2, each apexed with a strong spine. Eight tergites visible dorsally, ninth divided and tucked under ventrally to form rear portion of corona analis (Figs. 1, 2). Nine sternal plates clearly visible, first sternite provided with a pair of shortly elongated stigmata for book lungs or tracheal aperture as in Fig. 2. Coxae of first pair of legs not touching each other medially as in Fig. 2. Third coxa very narrow and compressed between second and fourth coxae (Fig. 2). Genital aperture not distinct. Genital operculum absent.

**Distribution:** Northern hemisphere: Japan and now reported for the first time from India (Arunachal Pradesh), Austria, Italy, Spain, France and USA (Oregon, Florida and Georgia.). Southern hemisphere : New Zealand, Australia (Queensland) and South Africa. On the Equator : Indonesia, Malaysia, Africa (Guinea), South America (Venezuela). Records from Sri Lanka are not clear.

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